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NOTES ON GEOGRAPHIC DISTRIBUTION

New records of *Trachycephalus mambaiensis* (Amphibia: Hylidae) from a cerrado region in Minas Gerais state, Brazil

Jussara Santos Dayrell [1*], Vitor Dias Fernandes [1], Mário Ribeiro Moura [1,2] and Renato Neves Feio [1]

1 Universidade Federal de Viçosa, Departamento de Biologia Animal, Museu de Zoologia João Moojen. Avenida Peter Henry Rolfs s/n. CEP 36570-000. Viçosa, MG, Brazil.
2 Ecos Biota Consultoria Ambiental. Rua Senador Vaz de Melo 64/40. CEP 36570-000. Viçosa, MG, Brazil.
* Corresponding author. E-mail: *jussaradayrell@gmail.com*

ABSTRACT: In this article we report two new records of *Trachycephalus mambaiensis* for the state of Minas Gerais and present a map which represents the known distribution of this species. The record of *T. mambaiensis* from municipalities of Bonito de Minas and Januária, state of Minas Gerais represents a distribution extension of 190 km southern from the type locality, at the municipality of Mambaí, state of Goiás.

Currently, the genus *Trachycephalus* Tschudi, 1838 includes twelve species of casque-headed tree frogs distributed along lowlands of Mexico, Central and South America east of the Andes, south to northern Argentina and eastern Brazil (Frost 2011). Eleven species are known to occur in Brazil, being six of them recorded in the state of Minas Gerais: *Trachycephalus atlas* Bokermann, 1966, *Trachycephalus imitatrix* (Miranda-Ribeiro, 1926), *Trachycephalus mambaiensis* Cintra, Silva-Jr, Garcia and Zaher, 2009, *Trachycephalus mesophaeus* (Hensel, 1867), *Trachycephalus nigromaculatus* Tschudi, 1838 and *Trachycephalus typhonius* (Laurenti, 1768) (Carvalho-e-Silva and Garcia 2004; Biodiversitas 2007; Lavilla *et al*. 2010; Frost 2011; Silveira and Pacheco 2011).

Trachycephalus mambaiensis Cintra, Silva, Silva-Jr, Garcia and Zaher, 2009 is a large-sized treefrog (snout-vent length 76.4–82.0 mm in males) mainly diagnosed by skin co-ossified with the skull, heavy cranial ossification, frontoparietal that fails to articulate with squamosal, absence of a crista occipitalis and secreting glands of milky and viscous substances. In addiction, the skull of *T. mambaiensis* shows an intermediary condition between species of *Trachycephalus* with a well ossified skull (Casque-headed frogs) and those without cranial ossification (Faivovich *et al*. 2005; Cintra *et al*. 2009). The species is known from municipalities of Mambaí (type-locality) and São Domingos, northern part of the state of Goiás (Cintra *et al*. 2009), Santa Maria da Vitória, state of Bahia, and municipality of João Pinheiro, state of Minas Gerais (Silveira and Pacheco 2011), Brazil. Here in we report new records of this species from the state of Minas Gerais, Brazil.

During a field expedition to the northern region of the state of Minas Gerais, on February and December 2008, we collected two specimens of *T. mambaiensis* (Figure 1) at Refúgio de Vida Silvestre do Rio Pandeiros (15°30'13" S, 44°45'28" W; 520 m elevation), a conservation unit in the municipality of Januária, and one specimen at Fazenda Santa Maria da Vereda (15°24'26" S, 44°50'18" W; 553 m elevation), municipality of Bonito de Minas, state of Minas Gerais, Brazil (collection permits given by Instituto Brasileiro do Meio Ambiente e dos Recursos Naturais Renováveis [IBAMA] #10504-1 and Instituto Estadual de Florestas [IEF] #075/08). Voucher specimens are housed at the herpetological collection of the Museu de Zoologia João Moojen, Universidade Federal de Viçosa, Viçosa, state of Minas Gerais, under the labels MZUFV 8340-8341, MZUFV 9638.

FIGURE 1. *Trachycephalus mambaiensis* (MZUFV 8340; female; 65.5 mm snout-vent length) from the municipality of Januária, state of Minas Gerais, Brazil. Photo by V.D. Fernandes.

All specimens of *T. mambaiensis* were captured by active searches. In Januária, at the Refúgio de Vida Silvestre do Rio Pandeiros, specimens were found at the border of a riparian forest, near a portion of lentic water flow on the right bank of Pandeiros river (Figure 2A). Specimens captured at Fazenda Santa Maria da Vereda were in Vereda areas (Figure 2B), a phytophysiognomy typical of the Cerrado biome, characterized by the abundant presence of shrub-trees, mainly by buriti palm trees (*Mauritia*

spp.) and shrub-herbaceous (Guimarães *et al*. 2002). The Vereda areas are hydrophilic environments with high soil moisture that during the rainy season, are usually flooded as a result of heavy rains (MMA 2007).

Figure 2. General view of the areas where specimens of *Trachycephalus mambaiensis* were collected. A) Riparian forest at Refúgio de Vida Silvetre do Rio Pandeiros, municipality of Januária. B) Vereda area at Fazenda Santa Maria da Vereda, municipality of Bonito de Minas, state of Minas Gerais, Brazil. Photos by J.S. Dayrell.

One of the voucher specimens (MZUFV 8341, Figure 3) was cleared and stained according to Marecha and Oliveira (1994) technique to allow identification according to the diagnosis presented by Cintra *et al*. (2009). The specimens identification's were also confirmed by Paulo C. de Anchieta Garcia (Universidade Federal de Minas Gerais, Belo Horizonte, Minas Gerais, Brazil).

The records of *Trachycephalus mambaiensis* from municipalities of Bonito de Minas and Januária represents a range extension of about 190 and 205 km, respectively, southern from its type locality (Figure 4). At this time, the localities where *T. mambaiensis* is known to occurs are inserted within the Cerrado biome as well in transition areas between Cerrado and Caatinga biomes (Drummond *et al*. 2005, Cintra *et al*. 2009). Is worth noting that the new populations of *T. mambaiensis* reported here are located in the priority area of *Peruaçu*, which is defined as extremely important for the conservation of herpetofauna in the state of Minas Gerais (Drummond *et al*. 2005) (Figure 4). Additionally, the record for the Refúgio de Vida Silvestre do Rio Pandeiros (Wildlife Refuge) represents the only population known to occur inside a protected area within the category of full protection. Also, these new localities, as well those reported by Freitas *et al*. (2011) and Silveira and Pacheco (2011), are distributed outside the Tocatins River Basin (where type locality is inserted), extending the occurrence of this species to the São Francisco River Basin.

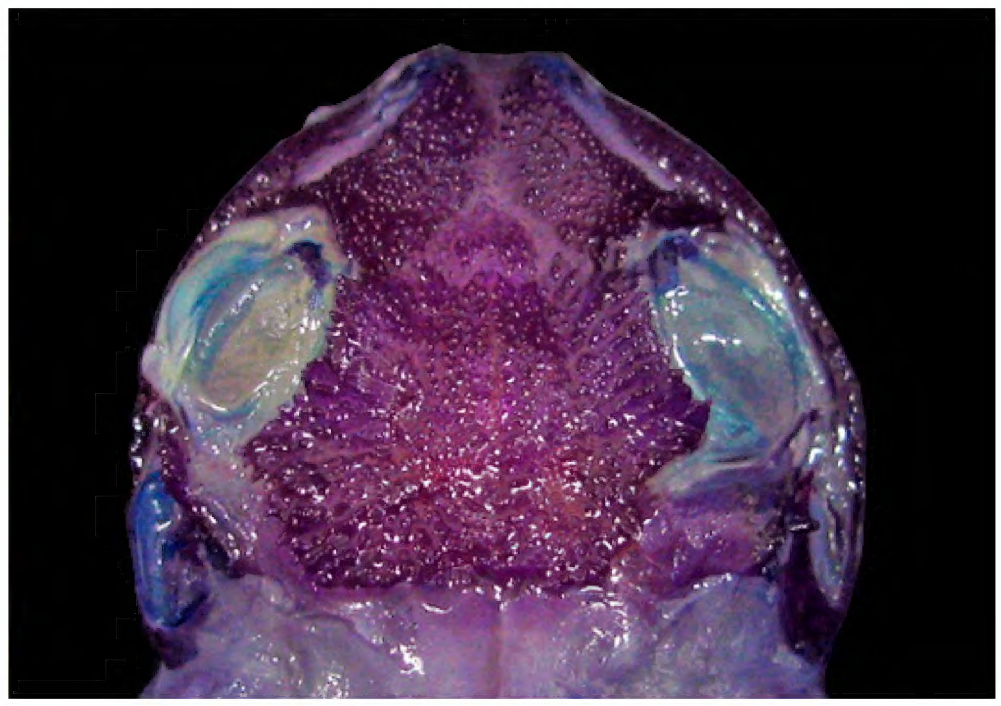

Figure 3. Skull of an adult *Trachycephalus mambaiensis* (MZUFV 8341, 72.0 mm snout-vent length) from the clearing technique. Photo by M.R. Moura.

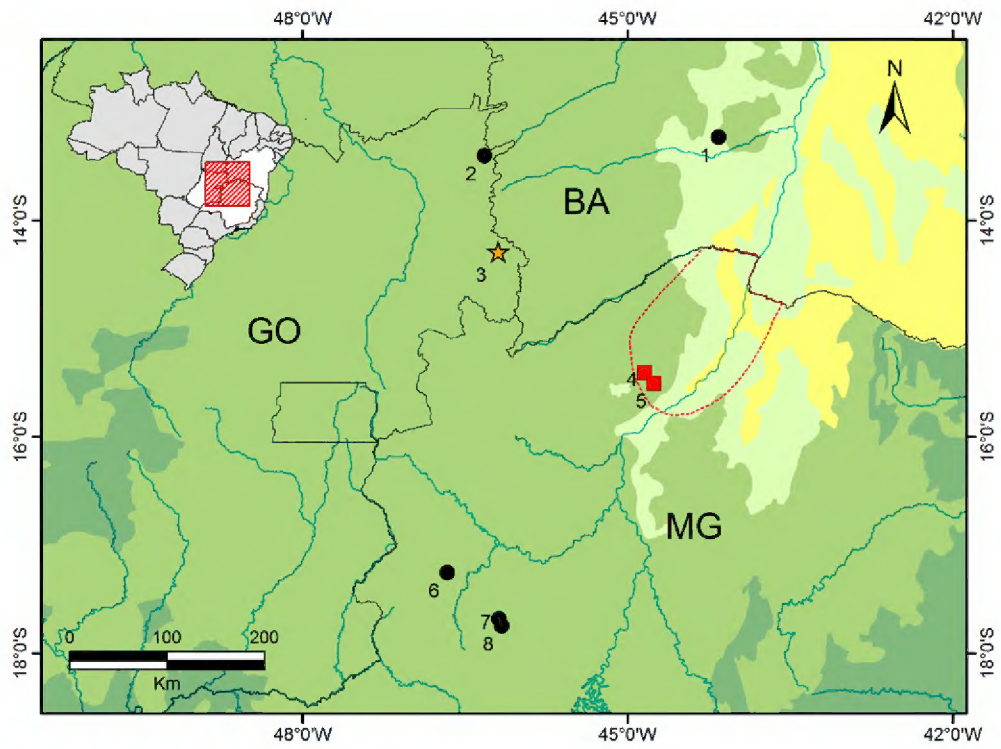

Figure 4. Geographic distribution of *Trachycephalus mambaiensis*. Type of records: Type-locality (orange star), Literature data (black circle), New record (red square). State abbreviations: BA, Bahia, GO, Goiás, MG, Minas Gerais. Municipalities: 1, Santa Maria da Vitória; 2, São Domingos; 3, Mambaí; 4, Bonito de Minas; 5, Januária; and 6 (Bocaína region, at the margin of Verde River), 7 (Fazenda Gameleira) and 8 (Capão da Água Limpa), the last three at the João Pinheiro. Hatched line: boundaries of the priority area of Peruaçu. ■ Atlantic Forest; ■ Cerrado; ■ Caatinga; ■ Atlantic Dry Forest. Map by M.R. Moura.

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